

Claims

- [c1] We claim as our invention:
1. An iron golf club head comprising:
a periphery member composed of a metal material, the periphery member having a sole wall, a toe wall extending upward from the sole wall at a first end of the sole wall, a hosel extending upward from the sole wall at a second end of the sole wall, and a heel wall extending upward from the sole wall;
a central member composed of a non-metal material, the central member having a body portion with a forward surface, a sole surface, a top surface, a toe surface, a heel surface and a flange extending from the top surface at an intersection of the top surface and the forward surface, the central member having a rear cavity defined by the body portion; and
a face plate composed of a metal material, the face plate disposed over the forward surface of the central member, a top line of the face plate in contact with the flange of the central member.
 - [c2] 2. The iron golf club head according to claim 1 wherein the face plate is composed of a titanium alloy material and has a thickness ranging from 0.050 inch to 0.250 inch.
 - [c3] 3. The iron golf club head according to claim 1 wherein the central member is composed of a bulk molding compound.
 - [c4] 4. The iron golf club head according to claim 1 wherein the periphery member is composed of an iron-nickel-tungsten alloy having a density of 8g/cm^3 to 11g/cm^3 .
 - [c5] 5. The iron golf club head according to claim 1 wherein the club head has a moment of inertia I_{xx} through the center of gravity of at least 2600 g-cm^2 .
 - [c6] 6. The iron golf club head according to claim 1 wherein an upper end of the hosel is located below the top line of the face plate when the golf club head is in the address position.
 - [c7] 7. The iron golf club head according to claim 1 wherein the central member has a volume percentage of the golf club head ranging from 25% to 75%, and a mass

percentage of the golf club head ranging from 10% to 30%.

[c8] 8. The iron golf club head according to claim 1 wherein the periphery member has a volume percentage of the golf club head ranging from 15% to 50%, and a mass percentage of the golf club head ranging from 50% to 80%.

[c9] 9. The iron golf club head according to claim 1 wherein the club head has a moment of inertia I_{zz} through the center of gravity of at least 2600 g-cm^2 .

[c10] 10. An iron golf club head comprising:
 a periphery member composed of an iron-nickel-tungsten alloy, the periphery member having a sole wall, a toe wall extending upward from the sole wall at a first end of the sole wall, a hosel extending upward from the sole wall at a second end of the sole wall, and a heel wall extending upward from the sole wall, the periphery member having a volume percentage of the golf club head ranging from 15% to 50%, and a mass percentage of the golf club head ranging from 50% to 80%;
 a central member composed of an epoxy resin with non-continuous carbon fibers, the central member having a body portion with a forward surface, a sole surface, a top surface, a toe surface, a heel surface and a flange extending from the top surface at an intersection of the top surface and the forward surface, the central member having a rear cavity defined by the body portion, the central member having a volume percentage of the golf club head ranging from 25% to 75%, and a mass percentage of the golf club head ranging from 10% to 30%; and
 a face plate composed of a titanium alloy, the face plate disposed over the forward surface of the central member, a top line of the face plate in contact with the flange of the central member.

[c11] 11. An iron golf club head comprising:
 a periphery member composed of a metal material, the periphery member having a sole wall, a toe wall extending upward from the sole wall at a first end of the sole wall, a hosel extending upward from the sole wall at a second end of the sole wall, and a heel wall extending upward from the sole wall;
 a central member composed of a non-metal material, the central member having a body portion with a forward surface, a sole surface, a top surface, a toe

surface, a heel surface and a flange extending from the top surface at an intersection of the top surface and the forward surface, the central member having a rear cavity defined by the body portion; and
a face plate composed of a metal material, the face plate disposed over the forward surface of the central member, an upper perimeter of the face plate in contact with the flange of the central member;
wherein the club head has a moment of inertia I_{zz} through the center of gravity of at least 2600 g-cm^2 and a moment of inertia I_{xx} through the center of gravity of at least 2600 g-cm^2 .